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22



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/775,646	02/05/2001	Susumu Takahashi	202447US2	8312
22850	7590	10/05/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			SINGH, RACHNA	
			ART UNIT	PAPER NUMBER
			2176	

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

22

Office Action Summary

Application No.

09/775,646

Applicant(s)

TAKAHASHI ET AL.

Examiner

Rachna Singh

Art Unit

2176

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is responsive to communications: Application filed 02/05/01.
2. Claims 1-32 are pending. Claims 1, 9, 16, 23, and 28 are independent claims.

Priority

3. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-2, 9-10, 16-17, 23, and 28 are rejected under 35 U.S.C. 102(e) as being anticipated by Tamaki et al., US 2001/0014836 A1, 8/16/01 (filed 2/12/01, continuation filed 6/19/98).

In reference to claims 1, 9, 16, 23, and 28, Tamaki teaches a production planning system in which a production plan comprises a data storage unit for storing parts list information providing a list of required parts, a parts stock storage section indicating parts stock information. See abstract and page 6, paragraphs [0117]-[0118]. Compare to **"a structured parts list information storage configured to store structured parts list information on components including a plurality of kinds of parts; a parts**

Art Unit: 2176

information storage configured to store parts information on a plurality of parts”.

Tamaki further teaches an adjusting means in which superfluous or deficient parts are identified from the parts stock information and parts information. Superfluous parts are eliminated as are deficient parts and the production planning system is adjusted accordingly. See page 6, paragraph [0117]-[0122] and page 18. Compare to ***“a parts information list creating and editing device configured to retrieve parts information on respective parts, stored in said structured parts list information storage, and to create a parts information list; and a structured parts information list creating and editing device configured to create an updated structured parts list information based on said parts information list created by said parts information list creating and editing device.”***

In reference to claims 2, 10, and 17, Tamaki teaches that the parts information in storage may include information regarding a name of the part, a feature such as quantity consumed, a cost evaluation module, etc. See figures 24-27.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3-8, 11-15, 18-22, 24-27, and 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tamaki et al., US 2001/0014836 A1, 8/16/01 (filed 2/12/01, continuation filed 6/19/98) in view of Tegethoff, US 5,539,652, 7/23/96.

In reference to claims 3-8, Tamaki does not teach a compatibility prediction information output device configured to survey on predetermined items (i.e. packaging density, arrangement, and operation verification) based on parts information list created by parts information list creating/editing device and to create and output decision information for compatibility prediction based on results from said survey. Tegethoff, however, teaches a method for manufacturing test simulation in electronic circuit design. Tegethoff teaches a test simulator that simulates a manufacturing test of boards and multichip modules from design concept to aid the designer in selecting trade-offs in design. The method models fault probabilities for the circuit design based on the components. Tegethoff further discloses the Manufacturing Test Simulator (MTSIM) which is a concurrent engineering simulation tool for manufacturing test, that is, a tool to predict manufacturing test behavior while a product is still being designed. See column 6. MTSIM uses pareto analysis in which a user can evaluate simulation results to determine faults, test coverage, etc. Pareto analysis can be done at three levels of abstraction including individual components, groups of components with the same part number, and groups of components. All part numbers are assigned a category based on level of integration and functionality. See column 11. Furthermore, Tegethoff teaches that the technology of circuit board assembly is evolving to support density demands of many modern circuit designs. Multi-chip modules and twelve-mil pitch surface mount technology (SMT) are frequently used to improve circuit density. SMT chip packages with lead counts of over 1000 are not uncommon. New fabrication processes are used to enable higher circuit densities usually have higher defect rates

than older low density fabrication technologies. Tegethoff teaches identifying defects in packaging densities. See columns 1-4. It would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate Tegethoff's prediction concerning operation, simulation, etc in a system of Tamaki's structured parts list because early prediction of manufacturing behavior drives design changes which optimize the product's manufacturability and testability, thus improving product quality and reducing cost and utilizing a parts list would help facilitate this prediction. See column 6 of Tegethoff.

Claims 11-15 are rejected under the same rationale used in claims 3, 5, 6, 7 and 8 respectively above.

Claims 18-22 are rejected under the same rationale used in claims 3, 5, 6, 7 and 8 respectively above.

Claims 24-27 are rejected under the same rationale used in claims 3, 5, 6, and 7 respectively above.

Claims 29-32 are rejected under the same rationale used in claims 3, 5, 6, and 7 respectively above.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Coburn et al. US 2004/0128120 A1

Gehlot US 6,353,806 B1

Sekitani US 6,633,787 B1

Art Unit: 2176

Bade et al. US 2002/0059054 A1

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rachna Singh whose telephone number is 703.305.1952. Starting in mid-October, the Examiner can be reached at 571-272-4099. The examiner can normally be reached on M-F (8:30-5).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on 703.305.9792. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RS
9/23/04


JOSEPH FEILD
SUPERVISORY PATENT EXAMINER